

The results from this test series demonstrate that exposed, lightweight composite wood joists are likely to fail three to five minutes after compartment flashover for structures with typical residential loadings. Further, the time to collapse as measured from the start of flaming combustion for the fire scenarios employed in this test series was between 8 and 12 minutes. This relatively small time frame prior to the failure of exposed composite wood joists may require the fire service to adopt alternative tactics and procedures for structures built using lightweight construction methods.

This test program further highlights the dramatic differences between the sprinklered and unsprinklered scenarios, as demonstrated through photographs, observations and data collected. All of the information presented shows that the addition of a sprinkler system can greatly enhance life safety of both residents and firefighters and aid in property protection. Today's homes contain more products with higher heat release rates than in previous years and the construction of these homes has become less fire resistant due to the use of lightweight construction materials. This combination has proven to be deadly for firefighters.

NOTE: The information with regard to "Item k and l" above was taken from an article published by NFPA.

- m. Education to understand the requirements of the 2009 International Residential Code, Sections R313 and P2904, to potential user groups such as the construction industry, code officials relative to NFPA 13D.

FINDING: The committee found that training on residential fire sprinkler systems is necessary to educate the affected stakeholders. These stakeholders being members of the fire service, building departments, building developers, architects, fire sprinkler contractors, public/private water suppliers, public health officials and other interested parties throughout Connecticut. Additionally, the committee found that through the Office of Education and Data Management, National Fire Protection Association, International Code Council and the sprinkler industry, this training is readily available.

Attachments